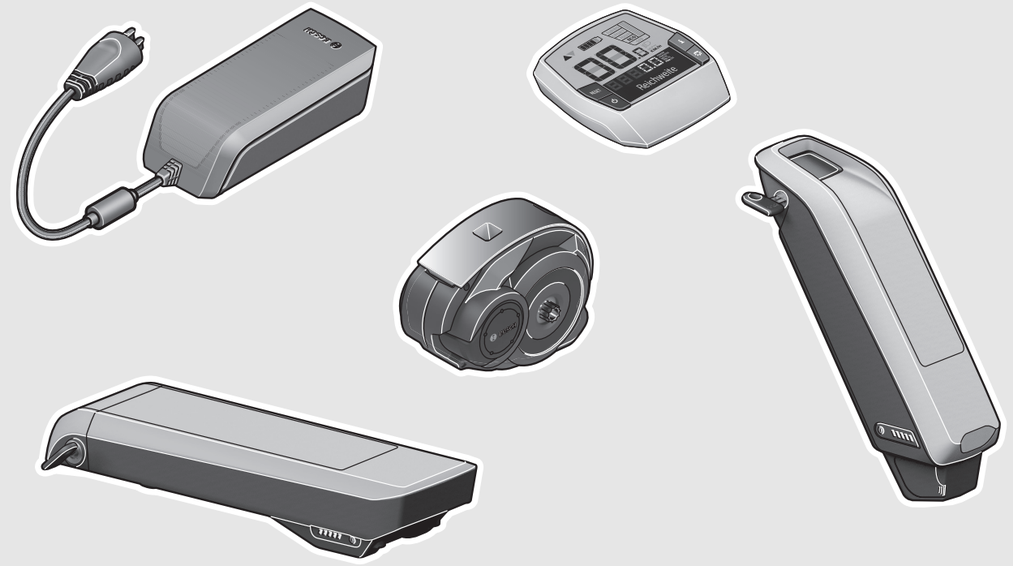
Performance Line – 28 mph

Performance Line – 28 mph



Robert Bosch GmbH
Bosch eBike Systems
72703 Reutlingen
GERMANY

www.bosch-ebike.com

0 276 002 USPen (2015.06) T / 35

Owner's Manual – The Bosch Drive System

Drive Unit | Intuvia | PowerPack | Charger

0 275 007 031 | 1 270 020 909 | 0 275 007 524/525 | 0 275 007 906

BOSCH

en Original instructions

This manual contains important safety, performance and service information. Read and understand it along with the information provided to you by your bicycle manufacturer before using the product, and keep it for reference.

Age: 18+

Introduction 3
- **General Warnings** 3
- **Using your Operator's Manual** 3

Bosch Drive System Overview 4
- **Bicycle View (Standard)** 4
- **Bicycle View (Rack-Type)** 5
- **Component View (On-board Computer/Operating Unit/Drive Unit)** .. 6
- **Component View (Battery Pack "PowerPack")** 7
- **Component View (Charger)** 8

On-Product Warning Labels 9

Operating your Bosch Drive System 10
- **Getting Ready to Ride** 10
- **Safe Start-Up Procedure** 11
- **Operation** 12
- **Maintenance/Cleaning** 16
- **Storing** 17

Bosch Drive System Components 18
- **Drive Unit/On-board Computer Intuvia** 18
- **Lithium-Ion Battery Pack "PowerPack"** 22
- **Charger** 27

Troubleshooting 31

Battery Recycling Program 34

Introduction

Thank You for Purchasing a Bosch Drive System Equipped Bicycle!

Your Bosch eBike system team appreciates having you as a customer and wishes you many years of safe and satisfied use of your bicycle.

General Warnings

Read all safety warnings and all instructions. Failure to follow the warnings and instructions may result in death or serious injury.

Save all safety warnings and instructions for future reference.

The term “battery pack” used in these operating instructions refers both to standard battery packs (battery packs with holder on the bike frame) and to rack-type battery packs (battery packs with holder in the rear rack/carrier).

About Warnings

This manual contains many **“DANGER”**, **“WARNING”**, and **“CAUTION”** indicators concerning the consequences of failing to use, assemble, maintain, store, inspect and dispose of a Bosch-equipped eBike in a safe manner.

The combination of the safety alert symbol and the word **“DANGER”** indicates a hazardous situation that, if not avoided, **will** result in death or serious injury.

The combination of the safety alert symbol and the word **“WARNING”** indicates a hazardous situation that, if not avoided, **could** result in death or serious injury.

The combination of the safety alert symbol and the word **“CAUTION”** indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

⚠ WARNING

- **The Bosch Drive System is intended for use by persons 18 years of age and older.** Riders must have the physical coordination, reaction and mental capabilities to control a bike and manage traffic, road conditions, and sudden situations, and also to respect the laws and instructions governing bicycle use.
- **This manual contains important safety, performance and service information.** Read it before you take the first ride on your new bicycle, and keep it for reference. The manual can also be found online at www.bosch-ebike.com.
- **This manual is intended to be read together with the separate user manual provided with your bicycle.** Be sure to read all provided documents including labels on the product before your first ride.
- **Read ALL accompanying manuals before riding the bike for the first time.** Your Bosch Drive System comes with additional manuals and documents provided by the manufacturer of the bicycle and other components. Failure to read and understand safety information can result in death or serious injury.
- **Take responsibility for your own SAFETY.** If you have any questions or do not understand something, contact your Bosch eBike dealer or the bicycle or component manufacturer.
- **Some eBike accessories may present a choking hazard to small children.** Keep these accessories away from children.

⚠ CAUTION

- **The Bosch Drive System adds weight to your bicycle which you may not be used to lifting.** Avoid injury; use proper lifting techniques.

Using your Operator’s Manual

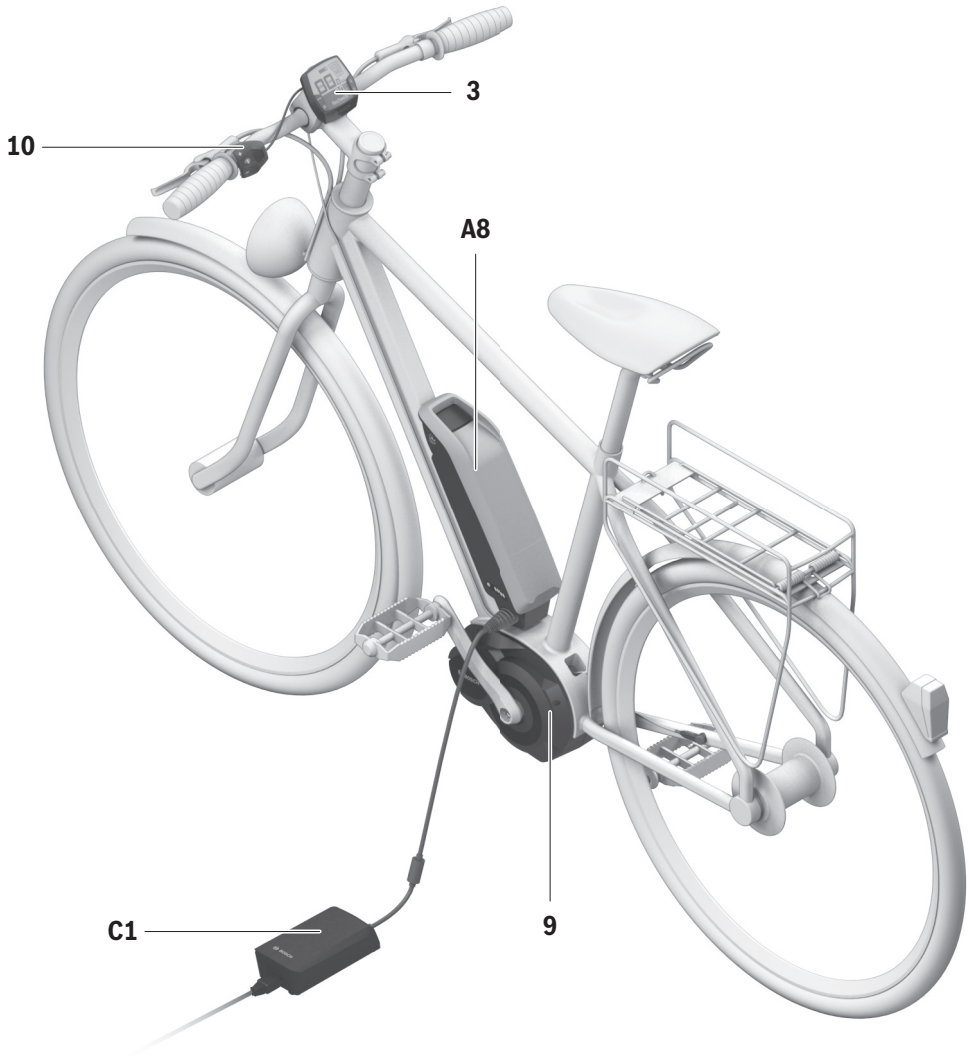
Graphics

The bicycle shown in this manual may differ slightly from your bicycle, but will be similar enough to help you understand our instructions.

RIGHT-HAND and LEFT-HAND sides are determined by facing in the direction the bicycle will travel when going forward. When you see a broken line (------), the item referred to is hidden from view.

Bosch Drive System Overview

Bicycle View (Standard)

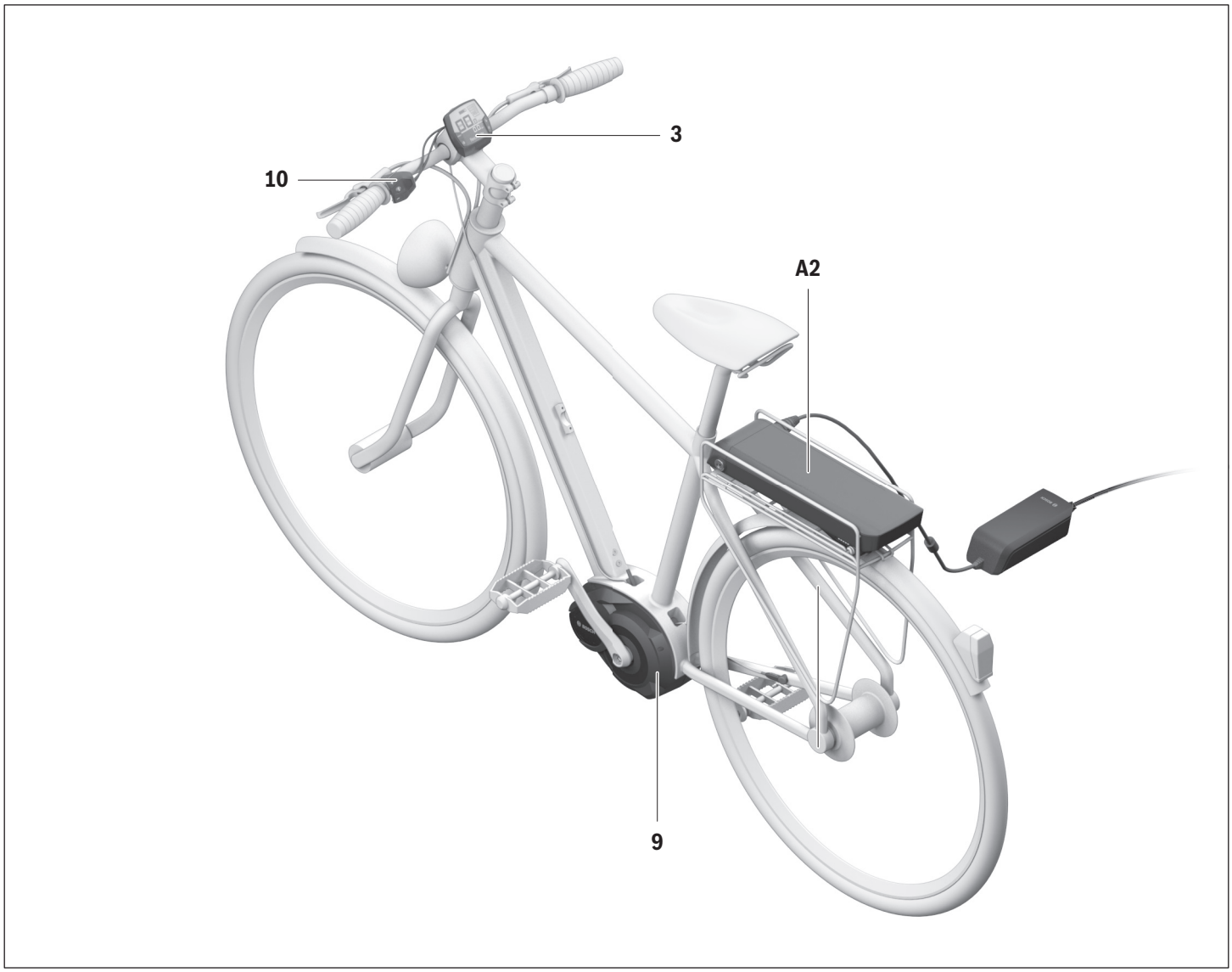


Bosch Drive System Components

All representations of bike components, with the exception of the eBike components, are schematic and can deviate from your eBike.

- **3** On-board computer Intuvia
- **9** Drive unit
- **10** Operating unit
- **A8** Standard battery pack “PowerPack”
- **C1** Battery charger

Bicycle View (Rack-Type)

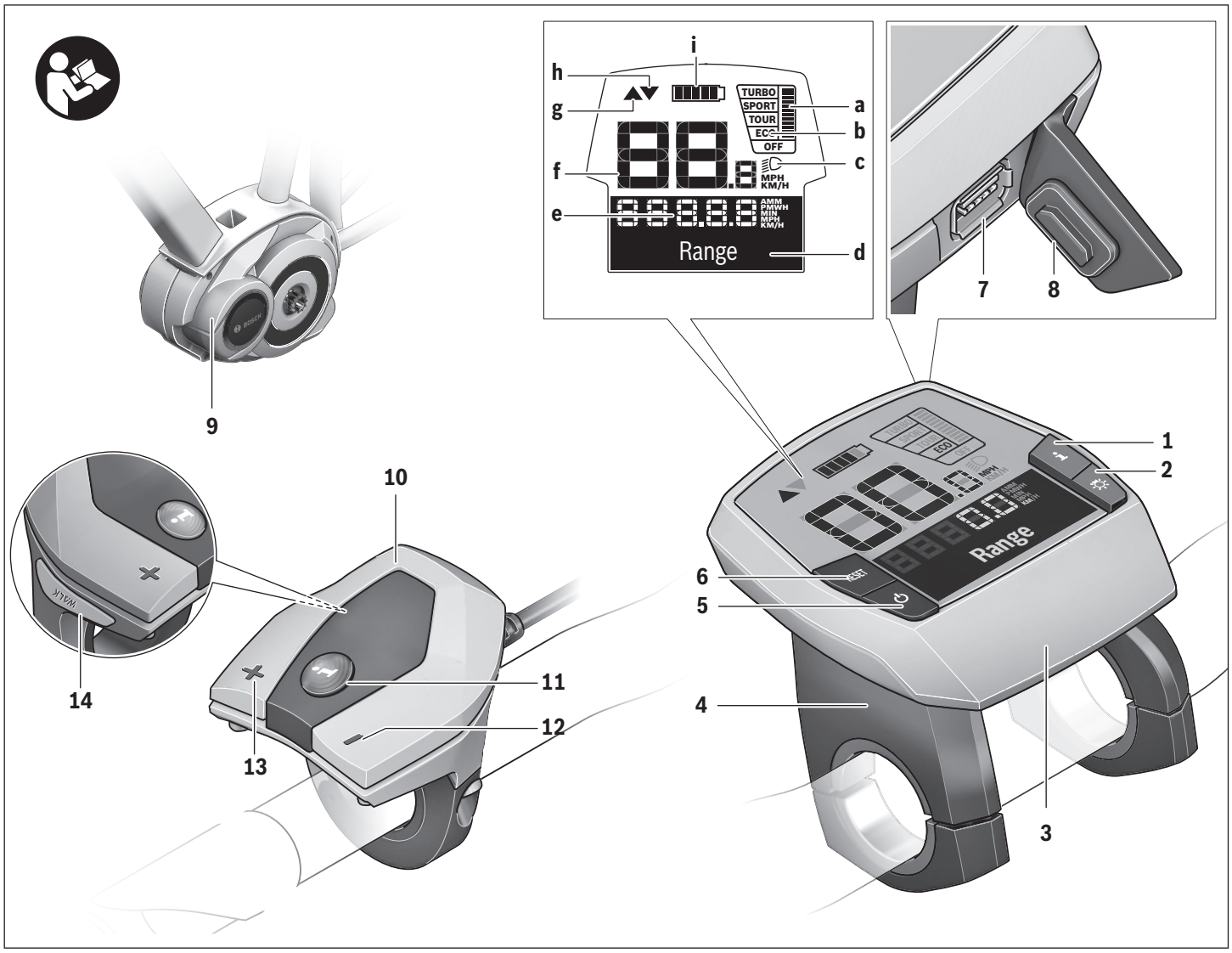


Bosch Drive System Components

All representations of bike components, with the exception of the eBike components, are schematic and can deviate from your eBike.

3 On-board computer Intuvia
9 Drive unit
10 Operating unit
A2 Rack-type battery pack “PowerPack”

Component View (On-board Computer/Operating Unit/Drive Unit)



Product Features

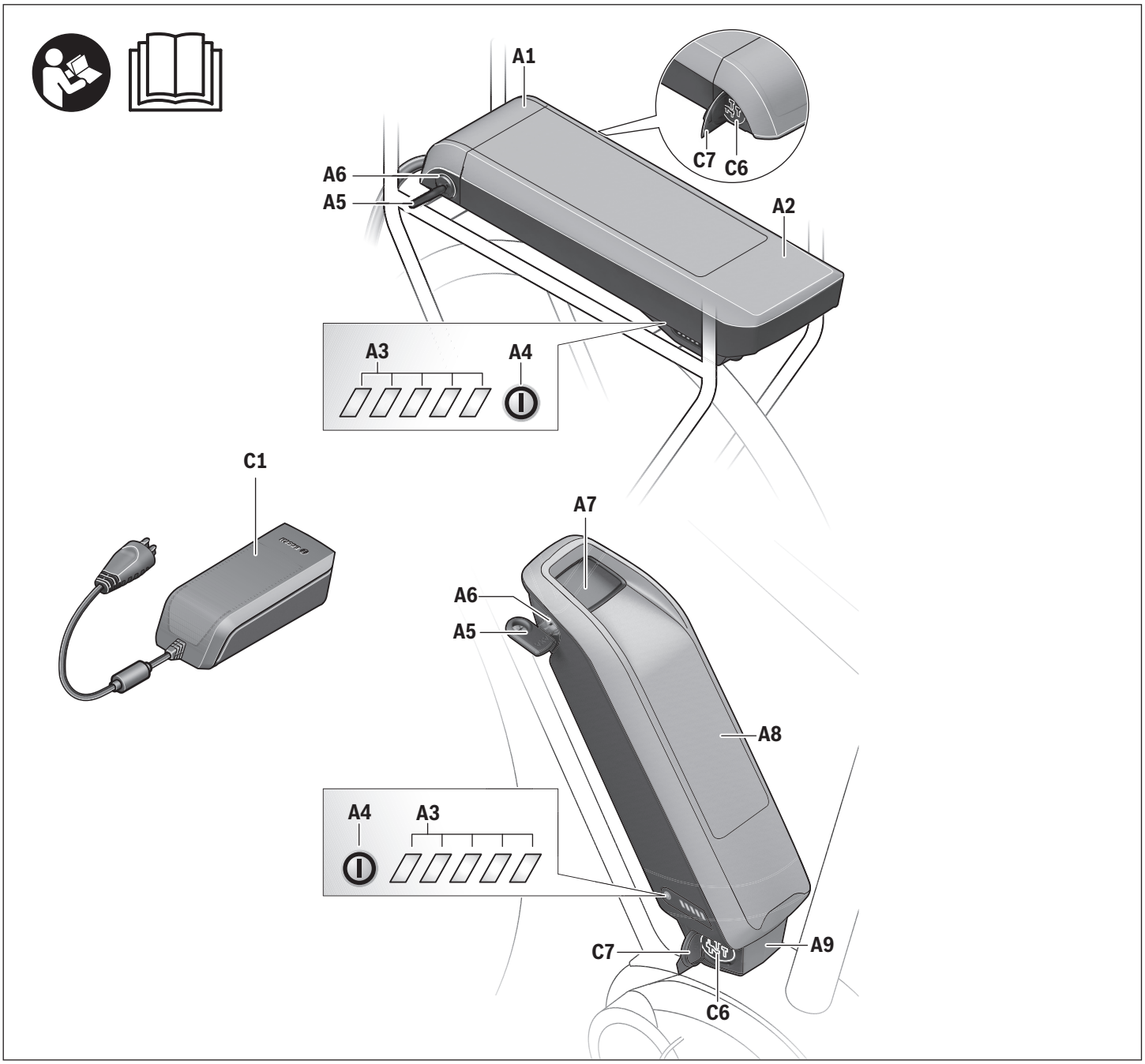
1 Display function button **“i”**
2 **“Light”** button
3 On-board computer Intuvia
4 Holder for on-board computer Intuvia
5 On/Off button for on-board computer
6 **“RESET”** button
7 USB port
8 Protective cap for USB port
9 Drive unit
10 Operating unit
11 Display function button **“i”** on the operating unit
12 Reduce assistance/scroll down button **“ – ”**
13 Increase assistance/scroll up button **“+”**
14 Push assistance button **“WALK”***

***Not executable in some countries**

On-board Computer Information

a Drive unit assistance indicator
b Assistance level indicator
c Light indicator
d Text indicator
e Value indicator
f Speed indicator
g Shift recommendation: higher gear
h Shift recommendation: lower gear
i Battery charge-control indicator

Component View (Battery Pack “PowerPack”)

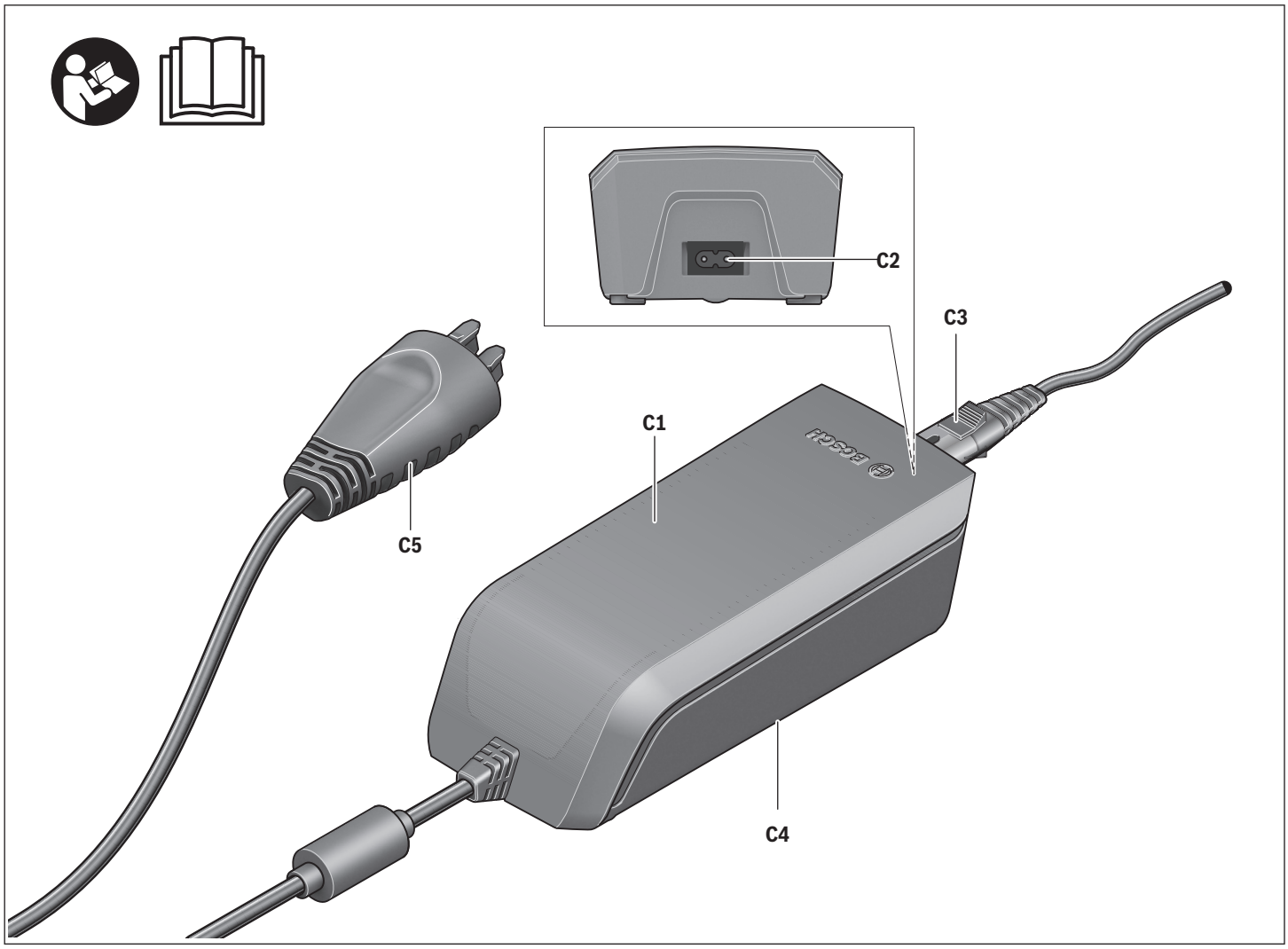


Product Features

All representations of bike components, with the exception of the battery packs and their holders, are schematic and can deviate from your eBike.

A1 Holder for the rack-type battery pack
A2 Rack-type battery pack
A3 Operation and charge-control indicator
A4 On/Off button
A5 Key for the battery pack lock
A6 Battery pack lock
A7 Upper holder for the standard battery pack
A8 Standard battery pack
A9 Bottom holder for the standard battery pack
C1 Battery charger
C6 Socket for charge connector
C7 Charge socket cover

Component View (Charger)

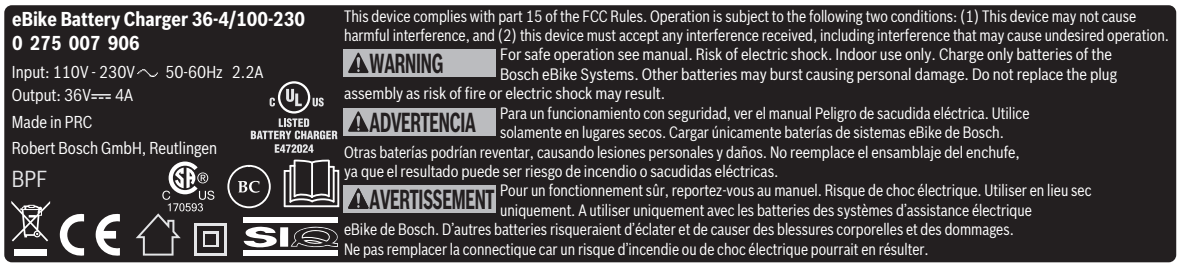


Product Features

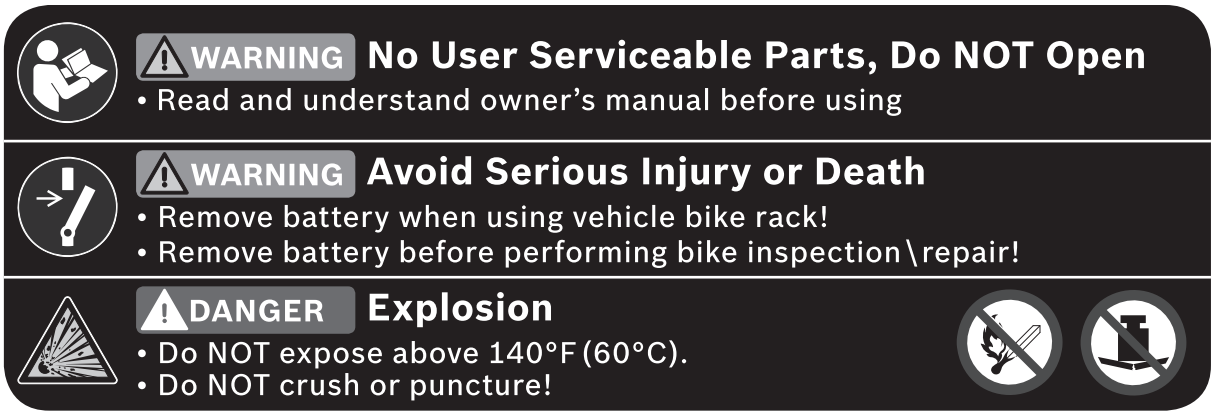
C1 Battery charger
C2 Charger socket
C3 Plug-in connector
C4 Safety warnings, charger
C5 Charge connector

On-Product Warning Labels

A



B



C

A Safety warnings, charger
B Safety warnings, "PowerPack"
C Safety Warnings on the eBike

▶ **Warning labels have been placed on the Bosch Drive System for your protection. Read and follow the instructions of the labels on the product carefully. If a label becomes illegible or comes off, contact your Bosch bicycle dealer to obtain a replacement.** Replacement safety labels are provided by Bosch at no charge.

Operating your Bosch Drive System

Getting Ready to Ride

⚠ WARNING

- **Read and understand all safety warnings and instructions.** Failure to follow the warnings below could result in death or serious injury.
- **Protect others from death or serious injury. Prevent unauthorized use.** Always remove the on-board computer or battery from the bicycle when not in use and store in a secure location. Failure to secure your bicycle from unauthorized use can result in death or serious injury to others.

Before your first ride

Check your bicycle owner's manual for important information about the bike components, such as brakes, pedals, gears, shifting equipment, etc.

⚠ WARNING

- **If you have an impairment or disability such as a visual impairment, hearing impairment, physical impairment, cognitive/language impairment, or a seizure disorder, consult your physician before using this product.**
- **To reduce the risk of serious injury related to exercise, take the following precautions before use: Do not overexert yourself.** Use of the Bosch Drive System requires varying amounts of physical activity.

  Consult a doctor before using the device if you have any medical condition or issue that affects your ability to safely perform physical activities, or if you:
  - are or may be pregnant
  - have heart, respiratory, back, joint, or other orthopedic conditions
  - have high blood pressure
  - have difficulty with physical exercise
  - have been instructed to restrict physical activity
- **Wearing a helmet can prevent a severe head injury. Whenever riding, always wear a helmet that meets or exceeds established safety standards.** Approved helmets in the USA must meet the US Consumer Product Safety Commission standard, so look for a CPSC reference.
- **Riding a Bosch drive system equipped bicycle capable of speeds up to 28 mph requires proficiency in the activity of road cycling.** This product can allow you to achieve speeds greater than you may be used to achieving without the aid of motor assistance. It also may allow for riding longer periods of time at a higher speed. Higher speed results in higher forces if a crash occurs. Control your bicycle at all times. Your risk of death or serious injury increases with both speed and age.

  The following is required for safe use of this product:
  - Knowledgeable of laws/safety guidelines/rules of road cycling (riding safely)
  - Ability to operate and control a standard road bike
  - Experienced rider who is actively riding
  - Capable, comfortable and confident riding safely at speeds up to 28 mph
  - Your bike should match your riding style, be properly fit to your body dimensions, and be well maintained.
- **Do not use this product under the influence of drugs and/or alcohol.**
- **While riding, do not become distracted by the on-board computer and always remain alert to all riding situations.** The on-board computer should only be used in a stationary and safe start-up position. Use the operating unit to change motor assistance levels while riding.
- **Check your bicycle manual for the maximum riding weight of your bicycle.** Overloading your bicycle can result in component failure, which can result in death or serious injury. Typically, the maximum riding weight is defined by the sum of the rider's weight plus the weight of any luggage.
- **In addition to reading and understanding your owner's manuals, be sure you know or refamiliarize yourself with local laws prior to using this product.** Consult your bicycle dealer, local library, bookstore to choose the learning resource best for you.

Intended Use

⚠ WARNING

- ► **Understand your bike and its intended use by checking your bicycle owner's manual.** Using your bike the wrong way and for a purpose for which it was not designed can result in death or serious injury.
- ► **Using the Bosch Drive System for purposes other than what is was designed for could cause death or serious injury.**

Proficient cyclist (Ages 18+) riding on paved surfaces where the tires are always on the ground; roadway, dedicated bicycle only lanes where permitted by law (not on pedestrian use shared lanes or sidewalks). No towing.

Your Bosch Drive unit is not intended for towing another bicycle. For trailer towing, check your bicycle owner's manual and the trailer owner's manual for towing instructions and towing compatibility.

Safe Start-Up Procedure

⚠ WARNING

- ► **Follow the safe start-up procedure below.** Failure to follow the safe start-up procedure can result in death or serious injury.

Preparations

Before starting, check the following:

- – Check that you have unplugged the battery charger
- – Your battery pack is locked in place (pull on the battery pack to ensure it is locked in place)
- – Remove the battery pack key

Start Riding

- – Sit in the saddle with both feet touching the ground and both hands on the handlebars.
- – Once you are in a stable position, turn on the Bosch onboard computer. The Bosch Drive System will always start-up in the **"OFF"** mode.
- – Place both hands on the handlebars and begin pedaling.

Operation

Initial Operation

Switching the eBike System On/Off

Options for **switching on** the eBike system:

– If the on-board computer is already switched on when inserted into the holder, then the eBike system will be switched on automatically.
– When the on-board computer and the eBike battery pack are inserted, briefly press the On/Off button **5** of the on-board computer once.
– When the on-board computer is inserted, press the On/Off button on the battery pack.

Once it is switched on, the eBike system is in the **“OFF”** mode. Select the desired assistance level and take off.

The drive is activated as soon as you put pressure on the pedals. The assistance level depends upon the on-board computer settings.

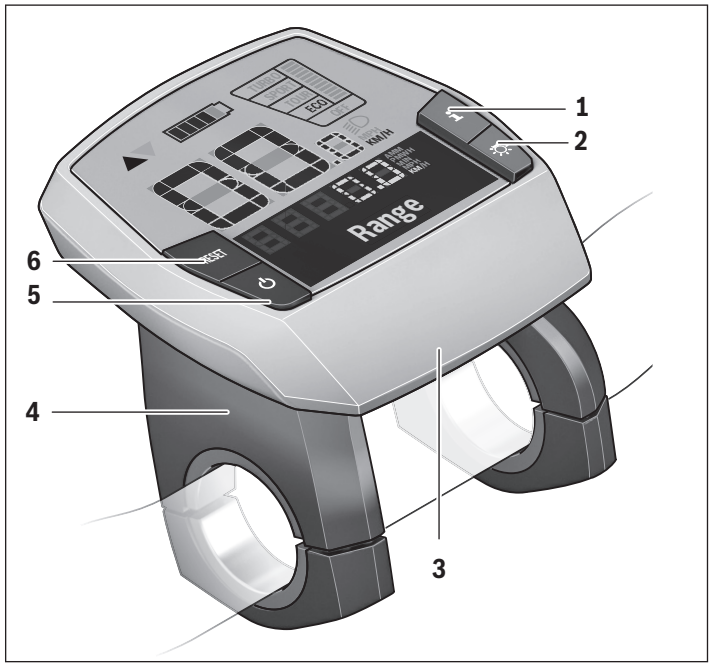
As soon as the system is activated, **“Performance Line”** appears briefly on the display.

As soon as you stop pedaling when in normal operation, or as soon as you have reached a speed of 28 mph, the assistance from the eBike drive unit is switched off. The motor assistance is automatically re-activated as soon you start pedaling again and the speed is below 28 mph.

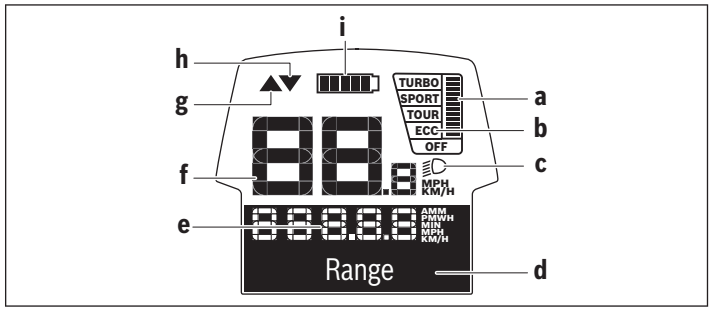
Options for **switching off** the eBike system:

– Press the On/Off button **5** of the on-board computer.
– Switch the eBike battery pack off by using its On/Off button (see battery pack operating instructions.)
– Remove the on-board computer out of its holder.

If the eBike is not moved **and** no button is pressed on the on-board computer for 10 minutes, the eBike system will shut down automatically in order to save energy.



Indications and Settings of the on-board computer



Switching the on-board computer On/Off

To **switch on** the on-board computer, briefly press the On/Off button **5**. When the internal battery pack is sufficiently charged, the on-board computer can also be switched on when not inserted in the holder.

To **switch off** the on-board computer, press the On/Off button **5**.

When the on-board computer is not inserted in the holder and no button is pressed, it automatically switches off after 1 min to save energy.

► **If you do not use your eBike for several weeks, remove the on-board computer from its holder.** Store the on-board computer in a dry environment at room temperature. Regularly recharge the on-board computer’s battery pack.

Battery charge-control indicator

The battery pack charge-control indicator **i** indicates the charge condition of the eBike's battery pack, and not the charge condition of the on-board computer's internal battery. The charge condition of the eBike's battery pack can also be read from the battery pack's LEDs.

On indicator **i**, each bar of the battery pack symbol is equivalent to a capacity of approx. 20 %:

- The eBike battery is fully charged.
- The eBike battery should be recharged.
- Once there are no remaining LED bars illuminated on the charge-control indicator, the motor support is gently switched off and the charge-control indicator begins to flash. The flashing charge-control indicator means there is only enough battery power remaining to power the eBike lights for approximately 2 more hours. This does not account for other consumers (e.g., automatic gearbox, charging external devices at the USB port).

When the on-board computer is removed from holder **4**, the last indicated battery pack charge condition is stored.

Setting the Assistance Level

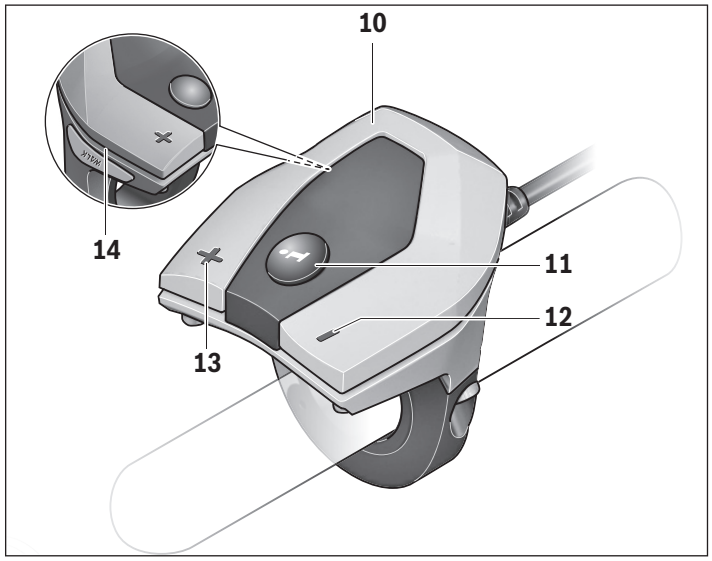
The level of assistance of the eBike drive unit when pedaling can be adjusted via the operating unit **10**. The assistance level can be changed anytime, even during riding.

Note: For individual versions, it is possible that the assistance level is preset and cannot be changed. It is also possible that fewer assistance levels are available for selection than listed here.

The following assistance levels (max.) are available:

- **"OFF"**: The motor assistance is switched off, the eBike can be operated as a normal bicycle through pedaling.
- **"ECO"**: Effective assistance at maximum efficiency for maximum cruising range
- **"TOUR"**: Uniform assistance, for touring with long cruising range
- **"SPORT"**: Powerful assistance for sporty off-road riding, as well as for urban traffic
- **"TURBO"**: Maximum assistance, supporting the highest speed for sporty riding

To **increase** the assistance level, press the **"+"** button **13** on the operating unit until the desired assistance level is displayed in indicator **b**; to **decrease** the assistance level, press the **"–"** button **12**.



The requested motor output is displayed in indicator **a**. The maximum motor output depends on the selected assistance level.

Assistance Level	Assistance Factor* (Derailleur)
"ECO"	55%
"TOUR"	120%
"SPORT"	190%
"TURBO"	275%

* The motor output can vary for individual versions.

When the on-board computer is removed from the holder **4**, then the last indicated level is **not** stored and the on-board computer is reset to the **"OFF"** mode.

Once it is switched on, the eBike system is in the **"OFF"** mode.

Switching bike lights On/Off

If your lights are set up to be powered by the eBike system, then you can use the **2** button on the on-board computer to simultaneously switch both the front light and the rear light on and off.

When the lighting is switched on, **“Lights on”** appears, and when the lighting is switched off, **“Lights off”** appears for approx. 1 s in the text indicator **d**. The light symbol **c** is displayed when the light is on.

Switching the driving light on and off has no effect on the backlighting for the display. The backlighting for the display is active as soon as the system or the display is switched on.

Speed and Distance Indicator

The **speed indicator f** always displays the current speed.

The following functions are available in the **function indicator** (combination of text indicator **d** and value indicator **e**):

- **“Clock”:** Current time
- **“Max. speed”:** Maximum speed achieved since the last reset
- **“Avg. speed”:** Average speed achieved since the last reset
- **“Trip time”:** Trip time since the last reset
- **“Range”:** Estimated range of the available battery pack charge (for constant conditions such as assistance level, route profile, etc.)
- **“Odometer”:** Display of the total distance traveled with the eBike (cannot be reset)
- **“Trip distance”:** Distance covered since the last reset

To **switch between the indication functions**, press the **“i”** button **1** on the on-board computer or the **“i”** button **11** on the operating unit until the desired function is displayed.

To **reset “Trip distance”**, **“Trip time”** and **“Avg. speed”**, switch to any of the three functions and then press and hold the **“RESET”** button **6** until the indicator is set to zero. This also resets the values for the other two functions.

To **reset** the **“Max. speed”**, switch to this function and then press and hold the **“RESET”** button **6** until the indicator is set to zero.

To **reset “Range”**, switch to this function and then press the **“RESET” 6** button until the display is reset to the value of the factory setting.

When the on-board computer is removed from the holder **4**, all function values remain stored and can be viewed.

Displaying/Adapting Basic Settings

The basic settings can be displayed and changed regardless of whether the on-board computer is inserted in the holder **4** or not. Some settings are visible and changeable only when the operating computer is inserted. Some menu items may be missing depending on the equipment of your eBike.

To access the basic settings menu, press and hold the **“RESET”** button **6** and the **“i”** button **1** until **“Configuration”** is displayed in text indicator **d**.

To **switch between the basic settings**, press the **“i”** button **1** on the on-board computer until the desired basic setting is displayed. When the on-board computer is inserted in holder **4**, you can also press the **“i”** button **11** on the operating unit.

To **change the basic settings**, press the On/Off button **5** next to the **“ – ”** indicator to decrease the value or scroll down, or the light button **2** next to the **“+”** indicator to increase the value or scroll up.

When the on-board computer is inserted in holder **4**, you can also change the values with the **“ – ”** button **12** or the **“+”** button **13** on the operating unit.

To exit the function and store a changed setting, press the **“RESET”** button **6** for 3 s.

The following basic settings are available:

- **“– Clock +”:** The current time can be set here. Pressing and holding the setting buttons fast-forwards the setting speed.
- **“– Wheel circum. +”**: You can change this value pre-set by the manufacturer by ± 5 %. This menu item is displayed only when the on-board computer is in the holder.
- **“– English +”:** You can change the language of the text indications. You can choose between German, English, French, Spanish, Italian, Portuguese, Swedish, Dutch and Danish.
- **“– Unit km/mi +”:** The speed and distance can be displayed either in kilometers or miles.
- **“– Time format +”:** The time can be displayed either in a 12-hour or 24-hour format.
- **“– Shift recom. on/off +”:** You can switch the indication of a shift recommendation on and off.
- **“Power-on hours”:** Indicates the total travel time with the eBike (can not be changed).
- **“Displ. vx.x.x.x”:** This is the software version of the display.
- **“DU vx.x.x.x”:** This is the software version of the drive unit.This menu item is displayed only when the on-board computer is in the holder.

- **“DU # xxxxxxxxx”:** This is the serial number of the drive unit. This menu item is displayed only when the on-board computer is in the holder.
- **“ Service MM/YYYY”:** This menu item is displayed when the bike manufacturer has set a fixed service appointment.
- **“ Serv. xx km/mi”:** This menu item is displayed when the bike manufacturer has set a fixed service appointment after a certain mileage has been reached.
- **“Bat. vx.x.x.x”:** This is the software version of the battery pack.This menu item is displayed only when the on-board computer is in the holder.

Error Code Indicator

The components of the eBike system are continuously and automatically monitored. When an error is detected, the respective error code is indicated in text indicator **d**.

To return to the standard indicator, press any button on the on-board computer **3** or on the operating unit **10**.

Depending on the type of error, the drive unit is automatically shut off, if required. Continued travel without assistance from the drive unit is possible at any time. However, have the eBike checked before attempting new trips.

► **WARNING: Have all checks and repairs performed only by an authorized Bosch eBike dealer.**

Notes on Riding with the eBike System

When does the eBike Drive Unit Operate?

The eBike drive unit assists you when riding, as long as you step on the pedals. Without pedaling, there is no assistance. The motor output always depends on the amount of your pedaling power.

When applying less pedaling power, the assistance or support will be lower than when applying a lot of pedaling power. This applies independent of the assistance level.

The eBike motor assistance automatically switches off at speeds in excess of 28 mph. When the speed falls below 28 mph, the motor assistance is automatically available again.

The eBike can also be ridden as a normal bicycle without assistance at any time, by either switching off the eBike system or setting the assistance level to **“OFF”**. The same applies when the battery pack is empty.

Interaction of the eBike System with the Bicycle Gears

The bicycle gears should be used as with a normal bicycle, even with eBike motor assistance (please follow the operating instructions for your eBike).

Independent of the type of gearing, it is recommended to briefly interrupt the pedaling while changing gears. This makes changing gears easier and reduces the wear on the drive train.

By selecting the right gear, you can increase the speed and range with the same pedaling effort.

For this reason, follow the shift recommendations provided by indications **g** and **h** on your display. If indication **g** is displayed, you should shift to a higher gear with lower cadence. If indication **h** is displayed, you should select a lower gear with higher cadence.

Test the operating range of your eBike under different conditions before planning longer and more challenging rides.

► **Read and understand the “Influences on the Operating Range” section below before planning your ride.**

Influences on the Operating Range

The operating range depends on many factors, such as the following:

- Assistance level,
- Gear-switching behavior,
- Bicycle tires and tire pressure,
- Age and condition of the battery pack,
- Route profile (inclines) and road or path conditions (road or path surface),
- Headwind and ambient temperature,
- Weight of the eBike, rider and equipment/luggage.

For this reason, it is not possible to precisely predict the range before or during a trip. General rules:

- For **the same** motor output of the eBike drive unit: the less power or force that you have to bring about to reach a certain speed (e. g., through optimal use of the gears), the less energy the eBike drive unit will consume, and the greater the range will be for a battery pack charge.
- The **higher** the assistance level under otherwise identical conditions, the shorter the range will be.

Note: Plan your routes so that you can also reach your destination each time without motor assistance.

Transport

⚠ WARNING

- ▶ **If you carry your eBike outside of your car, e.g. on a luggage rack, remove the on-board computer and the eBike battery pack in order to avoid damaging them.**
- ▶ **Always remove the battery pack from the bicycle before transporting the bicycle on a vehicle bike rack.** Failure to remove the battery pack when using a vehicle bike rack can lead to death or serious injury. The battery may detach during transport and cause an accident to following vehicles.
- ▶ **Always use an approved and compatible bicycle rack when transporting your eBike. The Bosch Drive System adds weight to the bicycle.** Refer to your bicycle rack manual to be sure your eBike is compatible. Overloading a bike rack can result in death or serious injury.
- ▶ **Use proper lifting techniques because electric bikes are generally heavier than bicycles.**

Ship batteries only when the housings are undamaged. Tape or mask off open contacts and pack up the battery in such a way that it cannot move around in the packaging. Notify your parcel service that the package contains dangerous goods. Please also follow possibly more detailed national regulations. Always check the state and federal regulations before attempting to ship your battery.

In case of questions concerning transport of the battery packs, please contact an authorized Bosch eBike dealer. Bosch eBike dealers can also provide suitable transport packaging.

Maintenance/Cleaning

⚠ WARNING

- ▶ **Your Bosch Drive System components are maintenance-free.** Do not open any of the components. Service should only be carried out at an authorized Bosch eBike dealer. Failure to follow the above warning may result in death or serious injury. Refer to your bicycle manual or component manual for all non-Bosch Drive System components.
- ▶ **Always remove the battery pack before performing any bicycle inspection, maintenance or repair.** Failure to remove the battery pack before performing bicycle inspection, maintenance or repair can lead to serious injury.
- ▶ **If you suspect that something is loose, do not ride your bike.** See your Bosch eBike dealer; only a qualified service provider should perform work on your Bosch Drive System. All nuts, bolts, screws require the correct tightening force. Too little force and the fastener may not hold securely. Too much force and the fastener can stretch, deform or break, or the threads can be stripped. Either way, incorrect tightening force can result in component failure, which can cause you to lose control and fall.
- ▶ **If replacing your battery, only buy a genuine Bosch battery pack from an approved source. See your Bosch eBike dealer for original Bosch parts.**
- ▶ **Always switch the battery pack off when inserting or removing it from the holder.** Never attempt to insert or remove the battery pack while riding the bike.
- ▶ **Do not charge or use your eBike in any area with a potentially explosive atmosphere, such as at a fueling area, or in areas where the air contains chemicals or particles (such as grain, dust, or metal powders).** Obey all signs and follow all instructions.
- ▶ **Do not submerge your eBike components in water, or wash using a pressurized hose.** Your Bosch drive unit is designed to be water tight in regards to rain water and non-pressurized hose washing.
- ▶ **Note down the manufacturer and the number of the key.** In case the keys are lost, please contact an authorized Bosch eBike dealer. Please provide the name of the manufacturer and the number of the key.
- ▶ **Do not paint any components of the Bosch Drive System as this may cause premature failure of the components.**

Careful Handling of the eBike

Please observe the operating and storage temperatures for the eBike components. Protect the drive unit, on-board computer and battery pack against extreme temperatures (e. g., from intense sunlight without adequate ventilation). The components (especially the battery pack) can become damaged because of extreme temperatures.

Have your eBike undergo a technical inspection at regular intervals. When the service appointment is due, the on-board computer will inform you of this for 4 seconds in the text indication **d** by displaying **"🔧 Service"** after the on-board computer has been switched on. The bike manufacturer can base the service appointment on a mileage and/or a time period.

Please contact an authorized bicycle dealer for service or repairs to the eBike.

After Sale Service and Customer Assistance

In case of questions concerning the eBike system and its components, please contact an authorized Bosch eBike dealer.

Contact data for authorized Bosch eBike dealers can be found at **www.bosch-ebike.com**

When the battery pack is no longer operative, please contact an authorized Bosch eBike dealer.

Cleaning

- ▶ **Do not submerge your eBike components in water, or wash using a pressurized hose.** Your Bosch drive unit is designed to be water tight in regards to rain water and non-pressurized hose washing.

Keep all components of your eBike clean, especially the battery pack contacts and the corresponding holder contacts.

All components including the drive unit may not be immersed in water or cleaned with a high-pressure cleaner. Keep all components of your eBike clean, especially the battery pack contacts and the corresponding holder contacts. Clean them carefully with a soft, damp cloth (using only mild soap and water).

Storing

Notes for Optimum Handling of the Battery Pack

The battery pack life can be extended if properly maintained and especially if operated and stored at the right temperatures.

With increasing age, however, the battery pack capacity will diminish, even if properly maintained.

A significantly reduced operating period after charging indicates that the battery pack is worn out and must be replaced. You can replace it yourself by purchasing a genuine Bosch PowerPack from an authorized Bosch eBike dealer.

Recharging the Battery Pack Before and During Storage

When not using the battery pack for a longer period, charge it to approx. 60 % (3 to 4 LEDs lit on the charge-control indicator **A3**).

Check the charge condition after 6 months. When only one LED on the charge-control indicator **A3** lights up, recharge the battery pack again to approx. 60 %.

Note: When the battery pack is stored discharged (empty) for longer periods, it can become damaged despite the low self-discharging feature, and the battery pack capacity may be strongly reduced.

It is not recommended to have the battery pack connected permanently to the charger.

Storage Conditions

Store the battery pack in a dry, well-ventilated location. Protect the battery pack against moisture and water. Under unfavorable weather conditions, it is recommended e. g., to remove the battery pack from the eBike and store it in an enclosed location until it is used again.

The battery pack can be stored at temperatures between +14 °F and + 140 °F. However, storing the battery pack at the optimal temperature of 68 °F will provide the longer battery life.

Make sure that the maximum storage temperature is not exceeded. As an example, store the battery pack out of direct sunlight and do not leave it in a vehicle during the summer.

It is recommended to not store the battery pack on the bike.

Bosch Drive System Components

Drive Unit/ On-board Computer Intuvia

⚠ WARNING

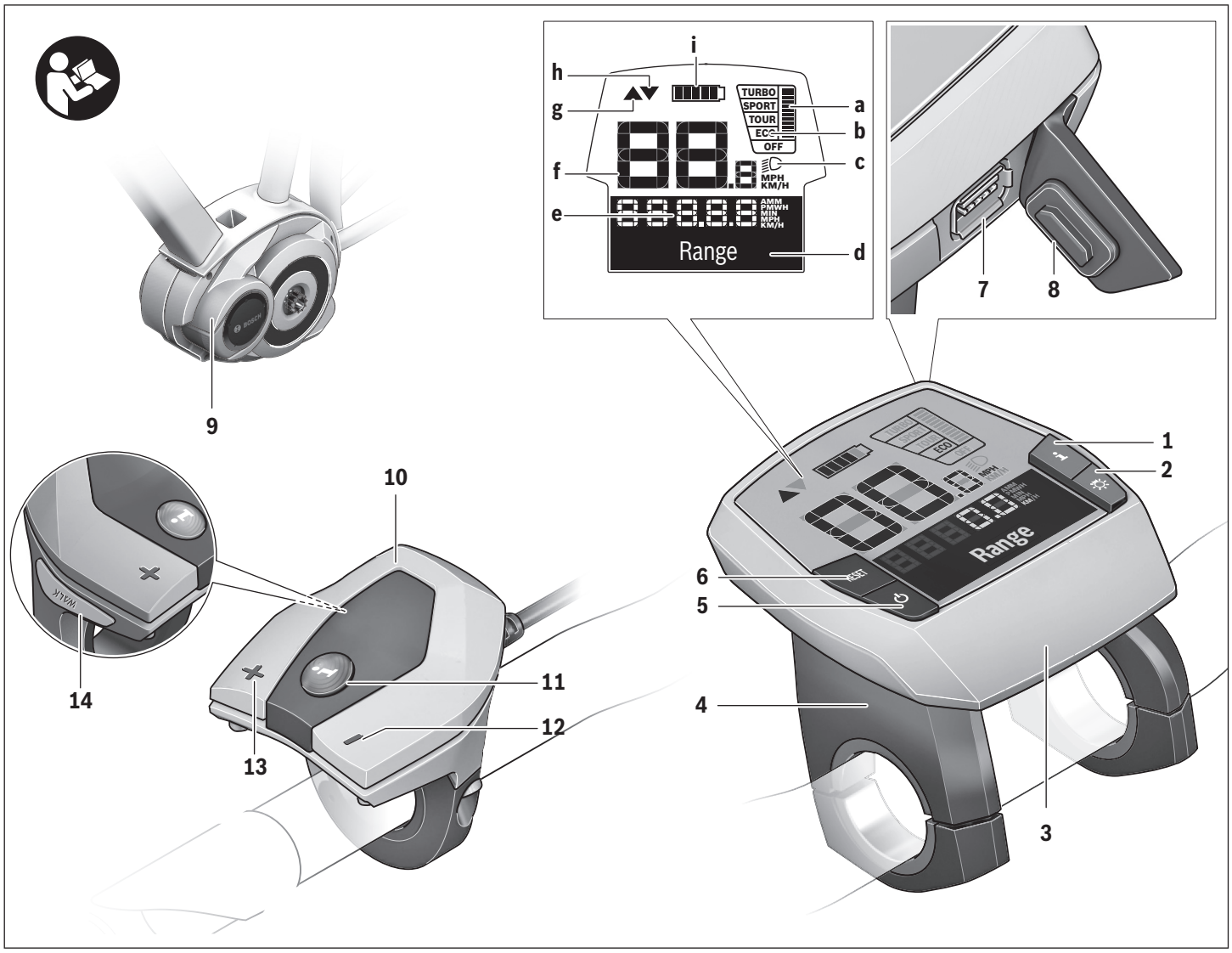
Read and understand all safety warnings and instructions. Failure to follow the warnings below could result in death or serious injury.

Save all safety warnings and instructions for future reference.

The term “battery pack” used in these operating instructions refers both to standard battery packs (battery packs with holder on the bike frame) and to rack-type battery packs (battery packs with holder in the rear rack/carrier).

- **Do not open the drive unit yourself. The drive unit must be repaired only by qualified experts and only with original spare parts.** This will ensure that the safety of the drive unit is maintained. Unauthorized opening of the drive unit will void warranty claims.
- **All components attached to the drive unit and all other components of the eBike drive (e. g., the chainwheel, chainwheel seat, pedals) may be replaced only with identical components or components specifically approved for your eBike by the bicycle manufacturer.** This protects the drive unit against overload and damage.
- **Remove the battery pack from the eBike before beginning work (e.g. inspection, repair, assembly, maintenance, work on the chain, etc.) on the eBike, transporting it by car or plane, or storing it.** Unintentional activation of the eBike system poses a risk of injury.
- **The eBike system can switch itself on when the eBike is pushed backwards.**
- **Use only original Bosch battery packs approved for your eBike by the manufacturer.** Using other battery packs can lead to injuries and pose a fire hazard. When using other battery packs, the warranty is void and Bosch shall not assume any liability.
- **Do not make any modifications to your eBike system or attach any other products which would be suitable for increasing the performance of your eBike system.** Unauthorized modification of the system could result in death or serious injury.
- **Please follow all local, state and federal regulations when registering and using eBikes.**
- **Please read and follow the safety warnings and instructions provided in the operating instructions for the battery pack as well as in the operating instructions for your eBike.**

Product Description and Specifications



Product Features

1 Display function button **“i”**
2 **“Light”** button
3 On-board computer Intuvia
4 Holder for on-board computer Intuvia
5 On/Off button for on-board computer
6 **“RESET”** button
7 USB port
8 Protective cap for USB port
9 Drive unit
10 Operating unit
11 Display function button **“i”** on the operating unit
12 Reduce assistance/scroll down button **“ – ”**
13 Increase assistance/scroll up button **“+”**
14 Push assistance button **“WALK”***

***Not executable in some countries**

On-board Computer Information

a Drive unit assistance indicator
b Assistance level indicator
c Light indicator
d Text indicator
e Value indicator
f Speed indicator
g Shift recommendation: higher gear
h Shift recommendation: lower gear
i Battery charge-control indicator

Technical Data

Drive unit		
Article number		0 275 007 031
Rated continuous power	W	250
Torque at drive, max.	Nm	60
Rated voltage	V⎓	36
Operating temperature	°F	+23…+104
Storage temperature	°F	+14…+122
Degree of protection		IP 54 (dust and splash water protected)
Weight, appox.	lb	8.8

Intuvia		
Article number		1 270 020 909
Max. charging current, USB connection	mA	500
Charging voltage, USB connection	V	5
Operating temperature	°F	+23…+104
Storage temperature	°F	+14…+122
Charging temperature	°F	+32…+104
Degree of protection		IP 54 (dust and splash water protected)
Weight, appox.	lb	0.3

This device is in compliance with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device must not cause harmful interference, and
(2) this device must accept any interference that is received, including interference that may cause undesired operation.

This device is in compliance with CAN ICES-3(B)/NM B-3(B).

Bosch eBike system uses FreeRTOS (see www.freertos.org)

Bike lights*		
Rated voltage	V⎓	6
Power output		
– Front light	W	8.4
– Rear light	W	0.6

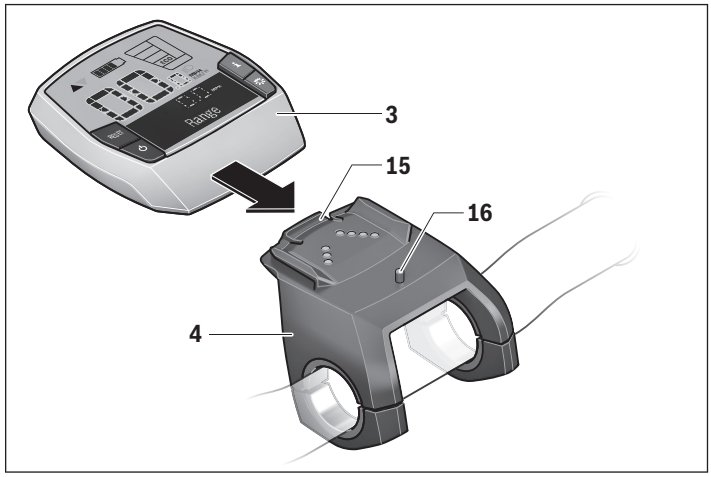
* Not possible via the eBike battery pack in all country-specific versions, depending on the statutory regulations

Assembly

Inserting and removing the battery pack

To insert or remove the battery pack in/from the eBike, please read and follow the battery pack operating instructions.

Inserting and removing the on-board computer



3 On-board computer
4 Holder for on-board computer
15 Lock latch for on-board computer
16 Locking screw for on-board computer

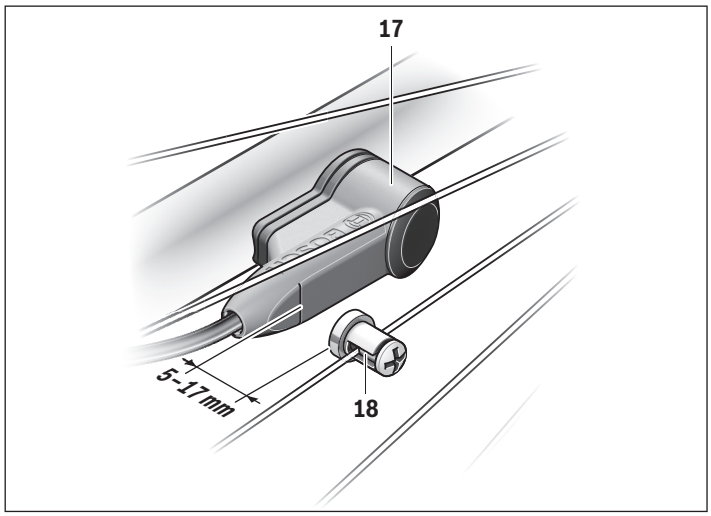
To **insert** the on-board computer **3**, slide it from the front into the holder **4**.

To **remove** the on-board computer **3**, press the lock latch **15** and slide the on-board computer toward the front out of the holder **4**.

► **Remove the on-board computer when you park the eBike.**

It is possible to secure the display unit against removal in the holder. To do so, remove the holder **4** from the handlebar. Put the display unit in the holder. Screw the locking screw **16** (thread M3, 8 mm long) from below into the thread provided in the holder. Attach the holder back onto the handlebar.

Checking the Speed Sensor



17 Speed sensor
18 Spoke magnet for the speed sensor

The speed sensor **17** and its spoke magnet **18** must be attached in such a way that the spoke magnet, after a turn of the wheel, moves past the speed sensor with a clearance of at least 5 mm, yet no more than 17 mm.

Note: If the clearance between the speed sensor **17** and the spoke magnet **18** is too small or too large, or if the speed sensor **17** is not properly connected, the speed indicator **f** will fail, and the eBike drive unit will operate in the emergency mode.

In this case, loosen the screw for the spoke magnet **18** and fasten the spoke magnet to the spoke in such a way that it runs past the mark of the speed sensor at the correct clearance. If the speed is still not being indicated on the speed indicator **f** after this is done, please contact an authorized Bosch eBike dealer.

Operation

Initial Operation

Requirements

The eBike system can only be activated when the following requirements are met:

– A sufficiently charged battery pack is inserted (see the operating instructions for the battery pack).
– The on-board computer is properly inserted into the holder.
– The on-board computer is properly connected.

Switching the eBike System On/Off

Options for **switching on** the eBike system:

– If the on-board computer is already switched on when inserted into the holder, then the eBike system will be switched on automatically.
– When the on-board computer and the eBike battery pack are inserted, briefly press the On/Off button **5** of the on-board computer once.
– When the on-board computer is inserted, press the On/Off button on the battery pack.

Once it is switched on, the eBike system is in the **“OFF”** mode. Select the desired assistance level and take off.

The drive is activated as soon as you put pressure on the pedals. The assistance level depends upon the on-board computer settings.

As soon as you stop pedaling when in normal operation, or as soon as you have reached a speed of 28 mph, the assistance from the eBike drive unit is switched off. The motor assistance is automatically re-activated as soon you start pedaling again and the speed is below 28 mph.

Options for **switching off** the eBike system:

– Press the On/Off button **5** of the on-board computer.
– Switch the eBike battery pack off by using its On/Off button (see battery pack operating instructions.)
– Remove the on-board computer out of its holder.

If the eBike is not moved **and** no button is pressed on the on-board computer for 10 minutes, the eBike system will shut down automatically in order to save energy.

Power Supply for External Devices via USB Connection

With the USB connection, it is possible to operate and charge most devices whose power supply is possible via a USB port (e.g., various mobile phones).

A prerequisite for the charging is that the on-board computer and a sufficiently charged battery pack are inserted in the eBike.

Open the protective cap **8** of the USB port on the on-board computer. Connect the USB connection of the external device to the USB port **7** on the on-board computer using the USB charging cable Micro A – Micro B (available from your Bosch eBike dealer).

Once the consumer has been disconnected, the USB connection must be sealed again carefully with the protective cap **8**.

► **A USB connection is not a waterproof plug-in connection. When riding in the rain, an external device must not be connected and the USB connection must be completely sealed with the protective cap 8.**

Lithium-Ion Battery Pack “PowerPack”

Read and understand all safety warnings and instructions. Failure to follow the warnings below could result in death or serious injury.

Save all safety warnings and instructions for future reference.

The term “battery pack” used in these operating instructions refers both to standard battery packs (battery packs with holder on the bike frame) and to rack-type battery packs (battery packs with holder in the rear rack/carrier), except when explicitly referring to the design type.

⚠ DANGER

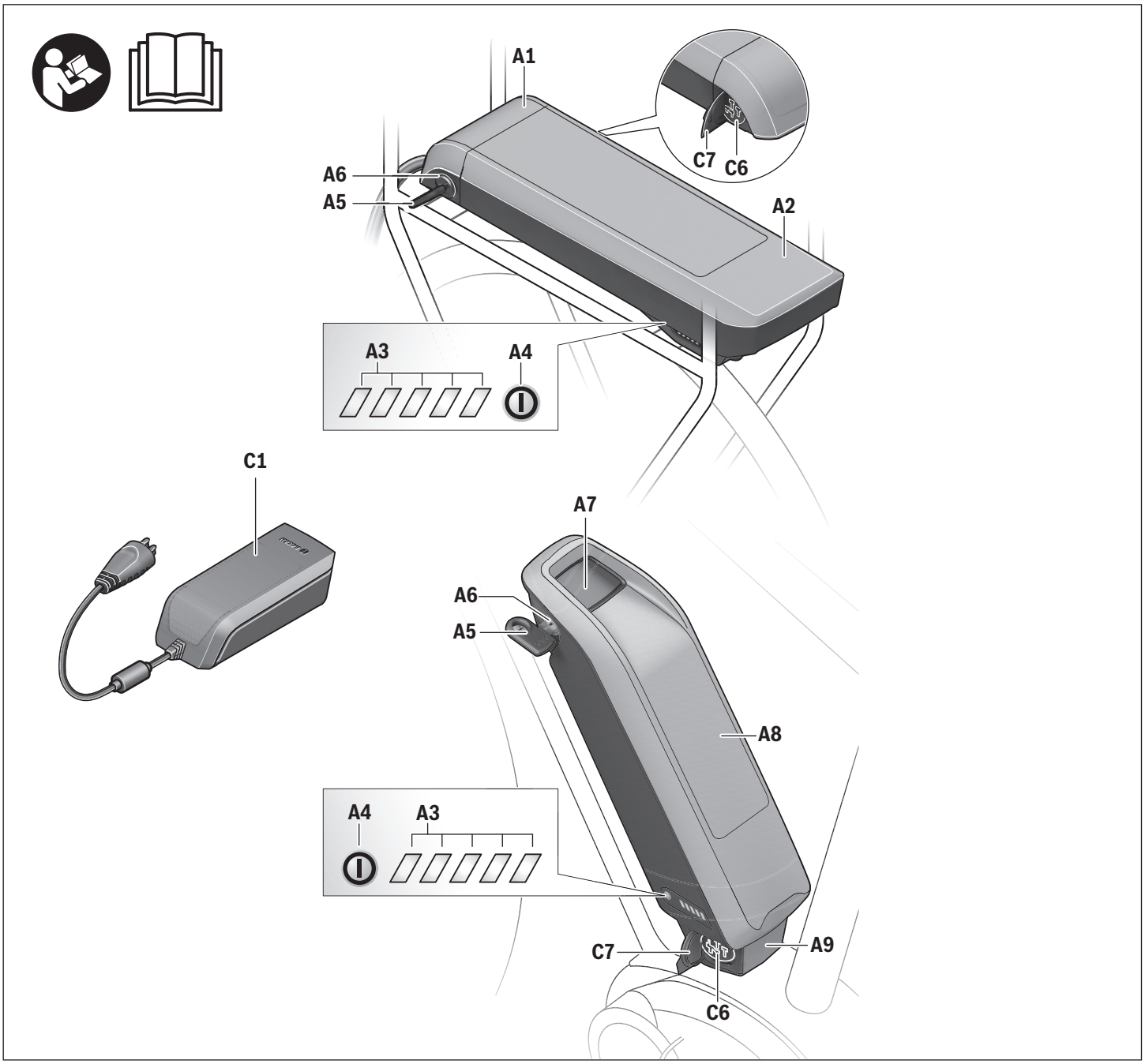
- **Do not puncture or crush the battery pack. Do subject the battery pack to mechanical impacts or modify it in any way.** Do not use the battery pack if it shows visible damage. Otherwise, there is the risk of a fire or an explosion, which can cause death or serious injury.

- **Protect the battery pack against heat (e.g., temperature > 140 °F), fire and immersing into water.** Otherwise, there is the risk of an explosion.

⚠ WARNING

- **Use only original Bosch battery packs approved for your eBike by the manufacturer and purchased from a trusted source.** Use of non-approved or counterfeit battery packs can lead to death or serious injury.
- **Remove the battery pack from the eBike before beginning work (e.g. inspection, repair, assembly, maintenance, work on the chain, etc.) on the eBike, transporting it by car or plane, or storing it.** Unintentional activation of the eBike system poses a risk of injury.
- **Do not open the battery pack.** There is a risk of a short circuit. Opening the battery pack voids any and all warranty claims.
- **If it is not being used, keep the battery pack away from paper clips, coins, keys, nails, screws or other small metal objects that can make a connection from one terminal to another.** Shorting the battery pack terminals together may cause burns or a fire. For any damage caused by shorting the terminals in this way, any and all warranty claims through Bosch shall be invalid.
- **If it is abused, then liquid may be ejected from the battery pack. Avoid contact. If contact accidentally occurs, flush with water. If liquid contacts eyes, additionally seek medical help.** Liquid ejected from the battery pack may cause skin irritations or burns.
- **Battery packs must not be subjected to mechanical impacts.** There is a risk that the battery pack will be damaged causing vapors to escape. The vapors can irritate the respiratory system. Provide for fresh air and seek medical attention in case of complaints.
- **Charge the battery pack only with original Bosch battery chargers.** When using non-original Bosch chargers, the risk of fire cannot be excluded.
- **Use the battery pack only together with eBikes that have an original Bosch eBike drive system.** This is the only way to protect the battery pack against dangerous overload.
- **Use only original Bosch battery packs approved for your eBike by the manufacturer.** Using other battery packs can lead to injuries and pose a fire hazard. When using other battery packs, the warranty is void and Bosch shall not assume any liability.
- **Please read and observe the safety warnings and instructions enclosed in the operating instructions for the charger and the drive unit/on-board computer, as well as in the operating instructions for your eBike.**
- **Keep the battery pack out of reach of children.**

Product Description and Specifications



Product Features

All representations of bike components, with the exception of the battery packs and their holders, are schematic and can deviate from your eBike.

A1 Holder for the rack-type battery pack
A2 Rack-type battery pack
A3 Operation and charge-control indicator
A4 On/Off button
A5 Key for the battery pack lock
A6 Battery pack lock
A7 Upper holder for the standard battery pack
A8 Standard battery pack
A9 Bottom holder for the standard battery pack
C1 Battery charger
C6 Socket for charge connector
C7 Charge socket cover

Technical Data

Lithium-ion battery pack		PowerPack 400
Article number – Standard battery pack – Rack-type battery pack		 0 275 007 524 0 275 007 525
Rated voltage	V=	36
Rated capacity	Ah	11
Energy	Wh	400
Operating temperature	°F	+23…+104
Storage temperature	°F	+14…+140
Permitted charging temperature range	°F	+32…+104
Weight, appox.	lb	5.5/5.7
Degree of protection		IP 54 (dust and splash water protected)

This device is in compliance with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device must not cause harmful interference, and
(2) this device must accept any interference that is received, including interference that may cause undesired operation.
This device is in compliance with CAN ICES-3(B)/NM B-3(B).

Assembly

► **Put the battery pack down only on clean surfaces.** In particular, avoid getting the charge socket and the contacts dirty, e. g., with sand or soil.

Checking the Battery Pack Before Using for the First Time

Check the battery pack before charging it or using it with your eBike for the first time.

To do this, press the On/Off button **A4** to switch on the battery pack. If no LED for the charge-control indicator **A3** lights up, then the battery pack may be damaged.

When at least one of the LEDs, but not all, for the charge-control indicator **A3** is lit, then fully charge the battery pack before using it for the first time.

► **Do not attempt to charge or use a damaged battery pack.** Please contact an authorized Bosch eBike dealer.

Charging the Battery Pack

► **Only use the Bosch charger provided with your eBike or an identical original Bosch charger.** Only this charger is matched to the lithium-ion battery pack used in your eBike.

Note: The battery pack is supplied partially charged. To ensure full battery pack capacity, completely charge the battery pack in the charger before using it for the first time.

To charge the battery pack, read and follow the operating instructions for the charger.

The battery pack can be recharged at any time on its own or on the bike without shortening the its service life. Interrupting the charging process does not damage the battery pack.

The battery pack is equipped with a temperature control indicator, which enables charging only within a temperature range between 32 °F and 104 °F.

When the battery pack is not within the charging temperature range, three LEDs of the charge-control indicator **A3** flash. Disconnect the battery pack from the charger until its temperature has adjusted.

► **CAUTION: Do not connect the battery pack to the charger until it has reached the permissible charging temperature.**

Charge-control Indicator

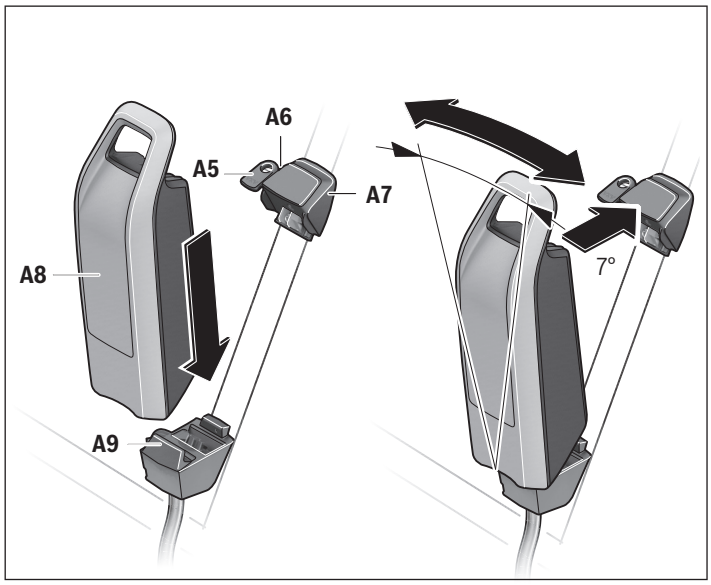
When the battery pack is switched on, the five green LEDs for the charge-control indicator **A3** indicate the charge condition of the battery pack.

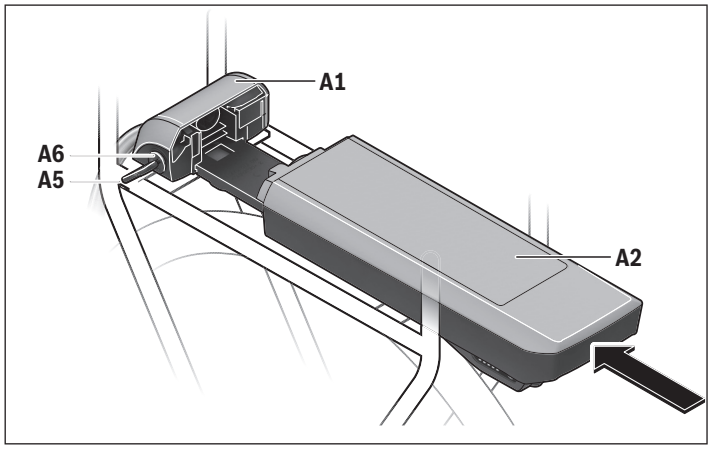
Here, each LED indicates approx. 20 % capacity. When the battery pack is completely charged, all five LEDs light up.

The charge-control for the switched on battery pack is also indicated on the display for the on-board computer. Read and follow the operating instructions for the drive unit and the on-board computer.

When the capacity of the battery pack is below 5 %, all LEDs for the charge-control indicator **A3** on the battery pack turn off; however, the on-board computer does provide an additional indicator function.

Inserting and removing the battery pack





► **Always switch the battery pack off when inserting or removing it from the holder.**

In order for the battery pack to be inserted, the key **A5** must be inserted into the lock **A6** and the lock must be unlocked.

To **insert the standard battery pack A8**, place it with the contacts on the lower holder **A9** on the eBike (the battery pack can be inclined up to 7° to the frame). Tilt it into the upper holder **A7** until it engages.

To **insert the rack-type battery pack A2**, slide it with the contacts facing ahead until it engages in the holder **A1** of the rear rack/carrier.

► **Always check that the battery pack is locked in place.** To do this, pull on the battery pack handle (after the key has been removed).

Check if the battery pack is tightly seated. Always lock the battery pack with lock **A6**; otherwise the lock can open and the battery pack could fall out of the holder.

After locking, always remove the key **A5** from the lock **A6**. This prevents the key from falling out and the battery pack from being removed by unauthorized persons when the eBike is parked.

To **remove the standard battery pack A8**, switch it off and unlock the lock with the key **A5**. Tilt the battery pack out of the upper holder **A7** and pull it out of the lower holder **A9**.

To **remove the rack-type battery pack A2**, switch it off and unlock the lock with the key **A5**. Pull the battery pack out of the holder **A1**.

Operation

Initial Operation

- ▶ **Use only original Bosch battery packs approved for your eBike by the manufacturer and purchased from a trusted source.** Use of non-approved or counterfeit battery packs can lead to death or serious injury.

Switching On and Off

Switching the battery pack on is one of the ways of starting the eBike system. Read and follow the operating instructions for the drive unit and the on-board computer.

Before switching on the battery pack or the eBike system, check that the lock **A6** is locked.

To **switch on** the battery pack, press the On/Off button **A4**. The LEDs for indicator **A3** light up and, at the same time, indicate the charge condition.

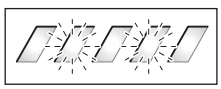
- ▶ **Always check that the battery pack is locked in place.** To do this, pull on the battery pack handle (after the key has been removed).

Note: When the battery pack capacity is below 5 %, none of the LEDs for charge-control indicator **A3** will light up. Only the on-board computer will indicate if the eBike system is switched on.

To **switch off** the battery pack, press the On/Off button **A4** again. The LEDs for indicator **A3** go out. This also switches off the eBike system.

When no power output from the eBike drive unit is requested for approx. 10 minutes (e. g., because the eBike is parked) and no button for the drive on-board computer or operating unit is pressed, then the eBike system, and thus the battery pack, automatically switches off to save energy.

The battery pack is protected against deep discharging, overcharging, overheating and short-circuiting by the “Electronic Cell Protection (ECP)”. In case of hazardous situations, a protective circuit automatically switches off the battery pack.



When a defect in the battery pack is detected, two LEDs for the charge-control indicator **A3** flash. In this case, please contact an authorized Bosch eBike dealer.

Charger

IMPORTANT SAFETY INSTRUCTIONS SAVE THESE INSTRUCTIONS – This manual contains important safety and operating instructions for this battery charger.

- ▶ **Before using battery charger, read all instructions and cautionary markings on battery charger, battery, and product using battery.**
- ▶ **CAUTION:** To reduce risk of injury, charge only batteries of the Bosch eBike Systems. Other types of batteries may burst causing personal injury and damage.

Read and understand all safety warnings and instructions. Failure to follow the warnings below could result in death or serious injury.

Save all safety warnings and instructions for future reference.

The term “battery pack” used in these operating instructions refers both to standard battery packs (battery packs with holder on the bike frame) and to rack-type battery packs (battery packs with holder in the rear rack/carrier), except when explicitly referring to the design type.

⚠ DANGER

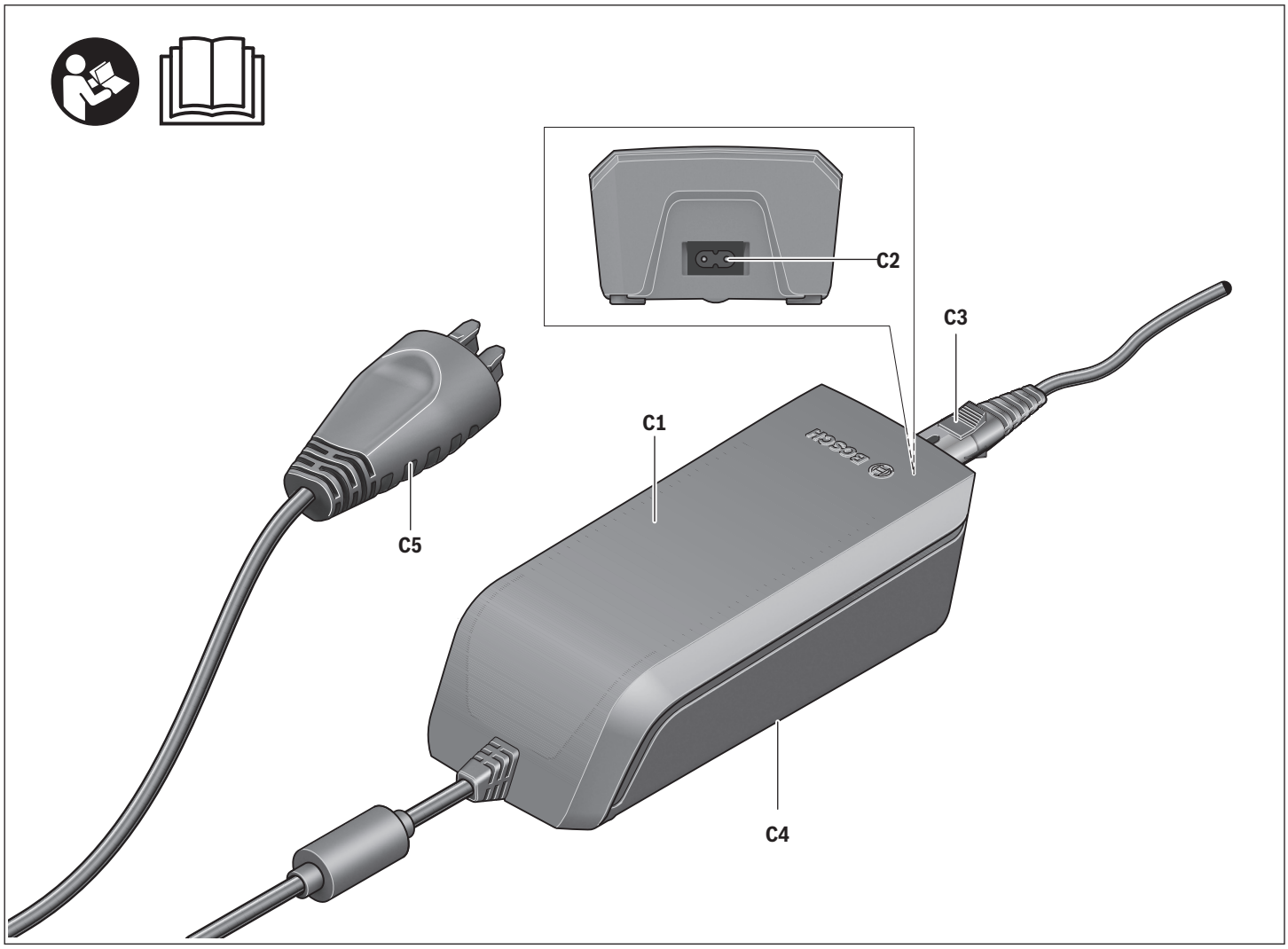
- ▶ **Only charge eBike-approved Bosch lithium-ion battery packs. The battery pack voltage must match the battery pack charging voltage of the charger.** Otherwise, there is risk of fire and explosion.

Keep the charger away from rain and moisture. The penetration of water into a battery charger increases the risk of an electric shock.

⚠ WARNING

- ▶ **Use only the original Bosch battery charger supplied with your eBike or one approved for your eBike by the manufacturer and purchased from a trusted source.** Bypassing the battery charger or the use of a non-approved or counterfeit battery charger can lead to death or serious injury.
- ▶ **Keep the battery charger clean.** Contamination can lead to the risk of an electric shock. Clean only with the use of a damp cloth (mild soap/water).
- ▶ **Check the battery charger, cable and plug each time before using. Do not use the battery charger when defects are detected. Do not open the battery charger yourself and have it repaired only by qualified personnel using original spare parts.** Damaged battery chargers, cables and plugs increase the risk of electric shock.
- ▶ **Do not operate the battery charger on easily flammable surfaces (e. g., paper, textiles, etc.) or in combustible environments.** There is danger of fire due to the heating of the battery charger during charging.
- ▶ **Use caution when touching the charger during the charging procedure. Wear protective gloves.** Especially in high ambient temperatures, the charger can heat up considerably.
- ▶ **Battery packs must not be subjected to mechanical impacts.** There is a risk that the battery pack will be damaged causing vapors to escape. The vapors can irritate the respiratory system. Provide for fresh air and seek medical attention in case of complaints.
- ▶ **Keep the battery charger away from children.** This will ensure that children do not play with the charger.
- ▶ **Persons who are not capable of safely operating the charger because of their physical, sensory or mental limitations, or because of their lack of experience or knowledge, may only use this charger under supervision or after having been instructed by a responsible person.** Otherwise, there is a risk of operating errors and injuries.
- ▶ **Please read and follow the safety warnings and instructions enclosed in the operating instructions for the battery pack and drive unit/on-board computer, as well as in the operating instructions for your eBike.**
- ▶ A short version of important safety warnings in English, French and Spanish with the following content can be found on the bottom side of the charger (marked with number **C4** in the representation on the graphics page, the label itself can be found in chapter “On-Product Warning Labels”):
  - For safe operation, see manual.
  - Risk of electric shock.
  - Indoor use only.
  - Charge only batteries for the Bosch eBike Systems. Other batteries may burst causing personal damage.
  - Do not replace the plug assembly as risk of fire or electric shock may result.

Product Description and Specifications



Product Features

C1 Battery charger
C2 Charger socket
C3 Plug-in connector
C4 Safety warnings, charger
C5 Charge connector

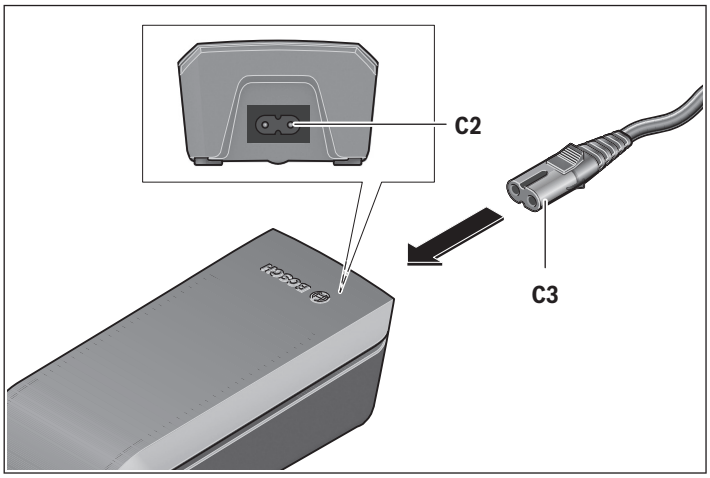
Technical Data

Battery Charger		Charger
Article number		0 275 007 906
Rated voltage	V~	90…264
Frequency	Hz	47…63
Output voltage	V⎓	36
Charging current	A	4
Charging time (PowerPack 400)	h	3.5
Operating temperature	°F	+32…+104
Storage temperature	°F	+14…+122
Weight according to EPTA-Procedure 01/2003	lb	1.8
Degree of protection		IP 40

Operation

Initial Operation

Connecting the Charger to Household Electricity

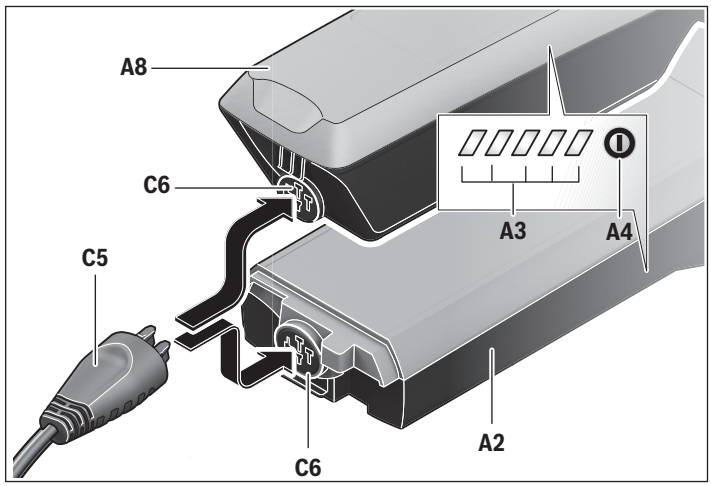


► **Note the household voltage!** The voltage of the power supply must correspond to the specifications given on the battery charger nameplate.

Plug the charger plug **C3** of the power cord into the charger socket **C2** of the charger.

Connect the power supply cable (country-specific) to the household electricity supply.

Charging the Removed Battery



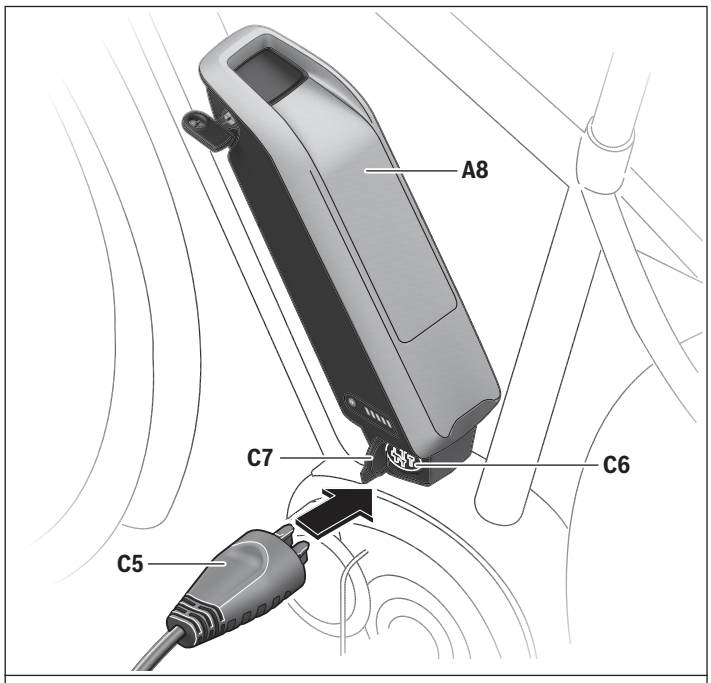
C5 Charge connector
C6 Socket for charge connector
A2 Rack-type battery pack
A3 Operation and charge-control indicator
A4 Battery On/Off button
A8 Standard battery pack

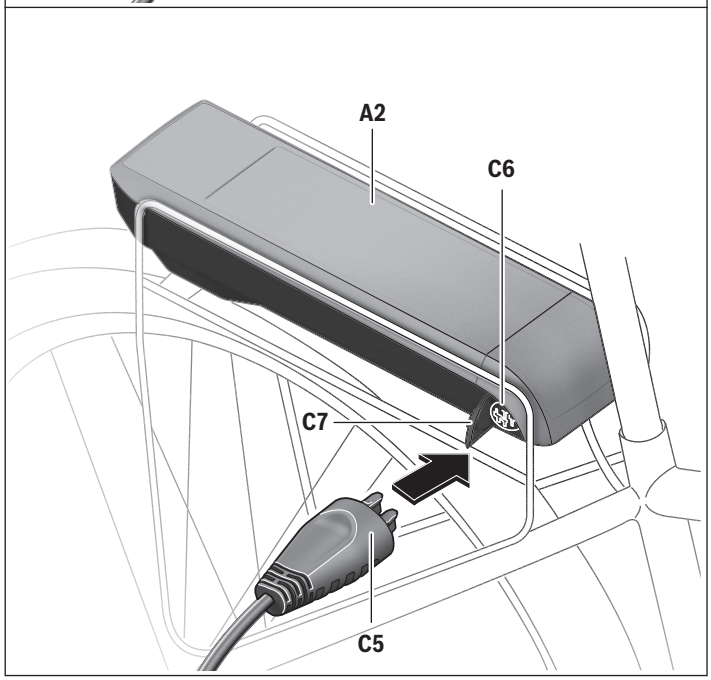
Switch the battery pack off and remove it from the holder of the eBike. To do this, read and follow the operating instructions for the battery pack.

► **Put the battery pack down only on clean surfaces.** In particular, avoid getting the charge socket and the contacts dirty, e.g., with sand or soil.

Insert the charger plug **C5** for the battery charger into the socket **C6** on the battery pack.

Charging the Battery on the Bike





Switch the battery off. Clean the cover of the charge socket **C7**. In particular, prevent the charge socket and the contacts from getting dirty, e. g., with sand or soil. Lift the cover of the charge socket **C7** and plug the charge connector **C5** into the charge socket **C6**.

- ► **Charge the battery only in accordance with all safety instructions.** If this is not possible, remove the battery from the holder and charge it in a more suitable location. When doing so, read and follow the operating instructions for the battery.

Charging Procedure

The charging procedure begins as soon as the charger is connected to the battery or the charge socket on the bike and the main power supply.

Note: The charging procedure is only possible when the temperature of the eBike battery pack is within the permissible charging temperature range.

Note: The drive unit is deactivated during the charging procedure.

The battery can be charged with or without the on-board computer. When charging without the on-board computer, the charging procedure can only be observed on the battery charge-control indicator.

If the on-board computer is connected, a corresponding message will be output on the display.

The on-board computer can be removed during the charging procedure, or it can also be attached after the charging procedure has begun.

The charging state is displayed by the battery charge-control indicator **A3** on the battery and by the bars on the on-board computer.

When charging the eBike battery on the bike, the battery for the on-board computer can also be charged.

During the charging procedure, the LEDs for charge-control indicator **A3** on the battery pack light up. Each continuously lit LED is equivalent to a charge capacity of approx. 20 %. The flashing LED indicates the charging of the next 20 %.

Once the battery is fully charged, the LEDs extinguish immediately and the on-board computer is switched off. The charging procedure is terminated. The charging state can be displayed for 3 seconds by pressing the On/Off button **A4**.

Disconnect the charger from the main power supply and the battery pack from the charger.

When disconnecting the battery pack from the charger, the battery pack is automatically switched off.

Note: If you have charged on the bike, carefully close the charge socket **C6** with the cover **C7** after the charging procedure so that no dirt or water can get in.

If the charger is not disconnected from the battery after charging, after a few hours the charger will switch itself back on, check the charging state of the battery and begin the charging procedure again if necessary.

Troubleshooting

On-board Computer Intuvia

Error Code Indicator

The components of the eBike system are continuously and automatically monitored. When an error is detected, the respective error code is indicated in text indicator **d**.

To return to the standard indicator, press any button on the on-board computer **3** or on the operating unit **10**.

Depending on the type of error, the drive unit is automatically shut off, if required. Continued travel without assistance from the drive unit is possible at any time. However, have the eBike checked before attempting new trips.

▶ **Troubleshooting actions may be performed by the owner except those explicitly noted as "Contact your Bosch eBike dealer".**

Code	Cause	Corrective Action
410	One or more buttons of the on-board computer are blocked.	Check if any buttons are blocked, e.g., by dirt or debris. Clean the buttons, if required.
414	Operating unit connection problem	Have connections and contacts checked.
418	One or more buttons of the operating unit are blocked.	Check if any buttons are blocked, e.g., by dirt or debris. Clean the buttons, if required.
422	Drive unit connection problem	Have connections and contacts checked.
423	EBike battery pack connection problem	Have connections and contacts checked.
424	Communications error among the components	Have connections and contacts checked.
426	Internal time-out error	Restart the system. If the problem persists, contact your Bosch eBike dealer. In this error status, it is not possible to display or adjust the wheel circumference in the basic settings menu.
430	Internal battery pack of on-board computer empty	Charge on-board computer (in holder or via USB port).
431	Software version error	Restart the system. If the problem persists, contact your Bosch eBike dealer.
440	Internal error in the drive unit	Restart the system. If the problem persists, contact your Bosch eBike dealer.
450	Internal software error	Restart the system. If the problem persists, contact your Bosch eBike dealer.
490	Internal error in the on-board computer	Have the on-board computer checked.
500	Internal error in the drive unit	Restart the system. If the problem persists, contact your Bosch eBike dealer.
502	Bike lighting error	Check the light and the associated wiring. Restart the system. If the problem persists, contact your Bosch eBike dealer.
503	Error of the speed sensor	Restart the system. If the problem persists, contact your Bosch eBike dealer.
510	Internal sensor error	Restart the system. If the problem persists, contact your Bosch eBike dealer.
511	Internal error in the drive unit	Restart the system. If the problem persists, contact your Bosch eBike dealer.
530	Battery pack error	Switch off the eBike, remove the eBike battery pack and reinsert the eBike battery pack. Restart the system. If the problem persists, contact your Bosch eBike dealer.

Code	Cause	Corrective Action
531	Configuration error	Restart the system. If the problem persists, contact your Bosch eBike dealer.
540	Temperature error	The eBike is outside of the permissible temperature range. Switch off the eBike system and allow the drive unit to either cool down or heat up to the permissible temperature. Restart the system. If the problem persists, contact your Bosch eBike dealer.
550	An improper load was detected.	Remove the load. Restart the system. If the problem persists, contact your Bosch eBike dealer.
580	Software version error	Restart the system. If the problem persists, contact your Bosch eBike dealer.
591	Authentication error	Switch off the eBike system. Remove the battery pack and reinsert it. Restart the system. If the problem persists, contact your Bosch eBike dealer.
592	Incompatible component	Insert a compatible display. If the problem persists, contact your Bosch eBike dealer.
593	Configuration error	Restart the system. If the problem persists, contact your Bosch eBike dealer.
595, 596	Communication error	Check the wiring to the transmission and restart the system. If the problem persists, contact your Bosch eBike dealer.
602	Internal battery pack error while charging	Unplug the charger from the battery pack. Restart the eBike system. Plug the charger into the battery pack. If the problem persists, contact your Bosch eBike dealer.
602	Internal battery pack error	Restart the system. If the problem persists, contact your Bosch eBike dealer.
603	Internal battery pack error	Restart the system. If the problem persists, contact your Bosch eBike dealer.
605	Battery pack temperature error	The eBike is outside of the permissible temperature range. Switch off the eBike system and allow the drive unit to either cool down or heat up to the permissible temperature. Restart the system. If the problem persists, contact your Bosch eBike dealer.
605	Battery pack temperature error while charging	Unplug the charger from the battery pack. Allow the battery pack to cool. If the problem persists, contact your Bosch eBike dealer.
606	External battery pack error	Check the wiring. Restart the system. If the problem persists, contact your Bosch eBike dealer.
610	Battery pack voltage error	Restart the system. If the problem persists, contact your Bosch eBike dealer.
620	Charging error	Replace the charger. Contact your Bosch eBike dealer.
640	Internal battery pack error	Restart the system. If the problem persists, contact your Bosch eBike dealer.
655	Multiple battery pack errors	Switch off the eBike system. Remove the battery pack and reinsert it. Restart the system. If the problem persists, contact your Bosch eBike dealer.
656	Software version error	Contact your Bosch eBike dealer so that he can perform a software update.
No display	Internal error in the on-board computer	Restart your eBike system by switching it off and back on.

PowerPack

Cause	Corrective Action
	Two LEDs of the battery pack flashing
Battery pack defective	Contact an authorized bicycle dealer.
	Three LEDs of the battery pack flashing
Battery pack too warm or too cold	Disconnect the battery from the charger until the charging temperature range has been reached. Do not connect the battery pack to the charger until it has reached the permissible charging temperature.
	No LED flashes (one or more LEDs light up continuously depending on the charging state of the eBike battery pack).
The charger is not charging.	Contact an authorized bicycle dealer.
No charging procedure possible (no indication on the battery pack)	
Plug not inserted correctly	Check all plug connections
Contacts of battery pack dirty	Carefully clean the contacts on the battery pack.
Socket outlet, cable or charger defective	Check household voltage; have charger checked through bicycle dealer
Battery pack defective	Contact an authorized bicycle dealer.

Battery Recycling Program

General Warnings

Disposal

The drive unit, on-board computer (incl. the operating unit), battery pack, speed sensor, accessories and packaging should be sorted for environmentally-friendly recycling.

Do not dispose of eBikes and their components with the household waste!

You may recycle your Bosch battery pack by calling 1-800-822-8837.